

1 WHAT IS CLAIMED IS:

- 1 1. A method for image processing, the method comprising:
 - 2 identifying candidate edge chains in an image being processed;
 - 3 determining a dynamic chain-based threshold function that is dependent on at
 - 4 least one characteristic of the image being processed;
 - 5 applying the dynamic chain-based threshold function to the candidate edge
 - 6 chains; and
 - 7 removing from a set of edge chains those candidate edge chains that fail to
 - 8 pass the dynamic chain-based threshold function.

2. The method of claim 1, wherein the characteristic of the image
10 comprises a local characteristic relating to a vicinity about the candidate edge chain.

3. The method of claim 2, wherein the local characteristic is calculated per point on a neighborhood surrounding each edge point in the candidate edge chain.

4. The method of claim 2, wherein the local characteristic is used to scale a function of the candidate edge chains.

15 5. The method of claim 4, wherein the function comprises an integrated
gradient value over edge points in each candidate edge chain.

6. The method of claim 5, wherein the local characteristic that is used to scale the integrated gradient value comprises an extrema intensity.

1 7. The method of claim 6, wherein the extrema intensity is used in
2 calculating an intensity factor that increases rapidly for higher intensities and decreases
3 moderately for lower intensities.

8. The method of claim 5, wherein the local characteristic that is used to
5 scale the function comprises an extrema density.

1 9. The method of claim 8, wherein the extrema density is used in
2 calculating a density factor which deviates from around unity when the extrema density
3 deviates from a reference density.

1 10. An apparatus for image processing, the apparatus comprising:

2 a candidate edge chain identifier for identifying candidate edge chains in an
3 image being processed;

4 means for determining a dynamic chain-based threshold function that is
5 dependent on at least one characteristic of the image being processed; and

6 a threshold applicator for applying the dynamic chain-based threshold function
7 to the candidate edge chains.

11. The apparatus of claim 10, wherein the characteristic of the image
comprises a local characteristic relating to a vicinity about the candidate edge chain.

10 12. The apparatus of claim 11, wherein the local characteristic is
calculated per point on a neighborhood surrounding each edge point in the candidate edge
chain.

13. The apparatus of claim 11, wherein the local characteristic is used to
scale a function of the candidate edge chains.

15 14. The apparatus of claim 13, wherein the function comprises an
integrated gradient value over edge points in each candidate edge chain.

15. The apparatus of claim 14, wherein the local characteristic that is used
to scale the integrated gradient value comprises an extrema intensity.

1 16. The apparatus of claim 15, wherein the extrema intensity is used in
2 calculating an intensity factor that increases rapidly for higher intensities and decreases
3 moderately for lower intensities.

17. The apparatus of claim 14, wherein the local characteristic that is used
5 to scale the function comprises an extrema density.

1 18. The apparatus of claim 17, wherein the extrema density is used in
2 calculating a density factor which deviates from around unity when the extrema density
3 deviates from a reference density.

1 19. The apparatus of claim 10, wherein the apparatus comprises a video
2 encoder.

1 20. The apparatus of claim 19, wherein the video encoder is configured to
2 operate cooperatively with a video decoder, and wherein the video decoder also comprises
3 the edge identifier, the means for determining, and the thresher.

1 21. The apparatus of claim 10, wherein the apparatus comprises a video
2 decoder.

1 22. A method for processing an image, the method comprises:
2 determining a dynamic chain-based threshold function that is dependent on at
3 least one local characteristic of the image being processed; and
4 applying the dynamic chain-based threshold function to a candidate edge
5 chain.

1 23. A system for image processing, the system comprising:
2 an encoder that includes a candidate edge chain identifier for identifying
3 candidate edge chains in an image being processed, means for calculating a dynamic chain-
4 based threshold function that is dependent on at least one characteristic of the image being
5 processed, and a threshold applicator for applying the dynamic chain-based threshold
6 function to the candidate edge chains; and
7 a decoder configured to operate in cooperation with the encoder, wherein the
8 decoder also includes the candidate edge chain identifier, the means for calculating, and the
9 threshold applicator,
10 wherein the characteristic of the image comprises a local characteristic relating
11 to a vicinity about the candidate edge chain.